

SEQ ID NO.	BIALLELIC MARKER ID	ORIGINAL ALLELE	ALTERNATIVE ALLELE
1	20-828-311	C	T
1, 4	17-42-319	C	T
1, 2, 4	17-41-250	C	T
1	20-841-149	A	G
1	20-842-115	G	A
1	20-853-415	C	T

Figure 1

SEQ ID no.	Biallelic Marker ID	Original Allele	Alternative Allele	Position Range of Preferred Sequences
1	20-828-311	C	T	739-1739
1	17-42-319	C	T	10946-12958; 13470- 13526; 13641-13752
1	17-41-250	C	T	14271-17969
1	20-841-149	A	G	41718-42718
1	20-842-115	G	A	44942-45942
1	20-853-415	C	T	76558-77558
2	17-41-250	C	T	1-1879
4	17-42-319	C	T	1-1498; 1613-1724
4	17-41-250	C	T	2243-3940; 3941-5381

Figure 2

A

SEQ ID NO.	POSITION OF CONFLICT	NUCLEOTIDE
1	13269 (SEQ ID No 1)	T (original)
4	1241 (SEQ ID No 4)	C (alternative)

B

SEQ ID NO.	POSITION OF CONFLICT	NUCLEOTIDE
1	13475 (SEQ ID No 1)	G (original)
4	1447 (SEQ ID No 4)	A (alternative)

Figures 3A, 3B

SEQ. ID. NO	POSITION RANGE O MICROSEQUENCING PRIMERS	COMPLEMENTARY POSITIN RANGE OF MICROSEQUENCING PRIMERS
1	1220-1238	1240-1258
1	12328-12346	12348-12366
1	15222-15240	15242-15260
1	42199-42217	42219-42237
1	45423-45441	45443-45461
1	77039-77057	77059-77077
4	300-318	320-338
4	3194-3212	3214-3232

Figure 4

SEQ. ID NO.	POSITION RANGE OF AMPLIFICATION PRIMERS	COMPLEMENTARY POSITION RANGE OF AMPLIFICATION PRIMERS
1	929-949	1357-1377
1	12029-12050	12581-12603
1	14992-15012	15460-15482
1	42070-42090	42572-42591
1	45328-45347	45863-45883
1	76644-76664	77166-77185
4	1-11022	553-11575
4	899-11920	1441-12461
4	1246-12267	1632-12651
4	2964-13984	3432-14454

Figure 5

SEQ. ID NO	POSITION RANGE OF PFOBES
1	1227-1251
1	12335-12359
1	15229-15253
1	42206-42230
1	45430-45454
1	77046-77070
4	307-331
4	3201-3225

Figure 6

Alignment of ApoA IV-related cDNA with Human and Swine cDNA's

ApoA IV related	AGACCTGAGCAGAGCAGATAATGGCAAGCATGGCTGCGTGCTCACCTGGGCTCTGGCT-CTTCTTTTCTAGGTTTTCGGC	79
Human ApoA IV	AGTTCCCACTGCGAGG-----CAGGTG-AGCTCTCTCTGAGGACCT-CTCTGTCTAGCTCCCTGATTGTAGGGAGG	68
Swine ApoA IV	-----GCA-----CAGGTG-AGCTG-DCTGAGAACCT-CTC-----CTCCAC-----GGAGG	39
ApoA IV related	CACCCAGGCACGAAAGGCTTCTGGACTACTTTCAGCCAGACCGGGGCAAAAGGCAGGCTGGAGCAGATCCATCAGC	159
Human ApoA IV	CATCCAG-TGTGGCAA-----GAACTCTCTCCAGCC-----CAGCAAG-CAGCT-CAGGATG-----TTCCTGA--	124
Swine ApoA IV	-ACCCAG-TGCAGTAA-----GAGACATCTCCAGCC-----CAGCGGG--AGCT-CAGGATG-----TTCCTGA--	93
ApoA IV related	AGAAGATGGCTGGGAGCCGCGACCTGAAAGACAGCCTTGAGAAAGACCTCAACAATAAGAACAGTTCTCTGAAAG	239
Human ApoA IV	AGGGCGTGGTCC-TGAGCCTG--GCCCTGG---TGGTGTGCGCCGAGCCAGGGC--TGAGGTGAG--TGCTGACCAAG	193
Swine ApoA IV	AGGCTGTGGTCC-TGAGCCTG--GCCCTGG---TGGCGCTCACCCTGCGCGGGC--TGAGGTCAA--TGCGACCAAG	162
ApoA IV related	CTGAGGCTTCTGAGTGGGAGCGAGCTCCTCGGCTCCACAGGACCGGCTGGGATGCGGCGCAGCTGCAGGAGGAGT	319
Human ApoA IV	T---GGCCACAG--TGAT-GTGGGACT-----ACCTCAGCCAG-CTGAGCAACAATGCCAAGGAGCGGT-GGAACATCT	260
Swine ApoA IV	T---GGTACTG--TGAT-GTGGGACT-----ACCTCAGCCAG-CTGGGAGCAATGCCAAGAAGGCTGT-GGAACATCT	229
ApoA IV related	GGAGGAGTGAAGGCTCGCTCCAGCCCTACATGGCAGAGGGGACGAGCTGGTGGGCTGGAATTGAGAGGCTTGGCGG	399
Human ApoA IV	CCAG-AAATCTGAACTCACC--CAGCAACTCA-----ATGCGCTC--TTCCAGGAC--AAACTTGGAG-----	316
Swine ApoA IV	CCAG-AAGTCTGAGCTCACC--CAGCGCTCA-----ACATCTC--TTCCAGGAC--AAACTTGGAG-----	285
ApoA IV related	AGCACTGAAGCCTACAGATGGATCTGATGAGGAGGTGGCGCTGCGGTCAGGAGCTGCAGAGGAGTTGGCGGTG	479
Human ApoA IV	---AAGTGAACACTTACGAGGTGACCTGCAGAAAGCTGGTGCCTTTGCCACGAGCTGCATGAAC-----GCCTG	387
Swine ApoA IV	---AAGTGAACACCTACACGAGGACCTGCAGAAAGCTGGTGCCTTTGCCACGAGCTGCATGAAC-----GCCTG	356
ApoA IV related	GTGGGGGAGACACCAAGGCCAGTTGTCTGGGGGCGGTGGAAGAGGCTTGGGCTTTGCTGAGGGACTGCAGAGCCGCT	559
Human ApoA IV	GC---CAAGGACTCGGAGA--AACTG--AAGGAG-----GAGATTGGGAAGGAGCTGGAGGAGCTGAGGCCCGGCT	452
Swine ApoA IV	AC---CAAGGACTCAGAGA--AGCTG--AAGGAG-----GAGATTGGAAGGAGCTGGAGGAGCTGCGAGCCCGGCT	421
ApoA IV related	GGTGACCAACACCGGCGCTTCAAGAGCTCTTCCACCCATACGCGAGAGCCTG-GTGAGCGGCATCGGCGCCACCTG	638
Human ApoA IV	GCTGCCCCATGCCAAT-----GAGGTGAGCCAGAAAGTCCGGGACAACTCCGAGAGCTTCAGCAG-CGCC--T	518
Swine ApoA IV	GCTGCCCCACGCTTCC-----GAGGTGAGCCAGAAAAATCGGAGACAACTGCGCGAGCTGCAGCAG-CGCC--T	487
ApoA IV related	CAGGAGTGTACCTGAGTGTGGCTCCGAGCGCCCGCCAGGCGCGGCGCTCAGTGGCTGCGTGCAGGTGCTCTCTG	718
Human ApoA IV	--GGAGCC-CTACCGGAGCAGCT--GCGCACCCAGGTCAACAG-CAGGCC-GAGCAGCTGCG--GCGC-CAGCTG	585
Swine ApoA IV	--GGGCCC-CTTTACGGGAGGGCT--GCGCACCCAGGTCAACACC-CAGGTT-CAGCAGCTGCA--GCGC-CAGCTG	554
ApoA IV related	GAAGCTCAGCTCAAGGCCAAGGCTCTGACCGACGATCCAGCAGAACTGGACAGCTTGGGCGAAGAGCTGACAGAG	798
Human ApoA IV	ACCCCTTACG--CAGAGC--GCATGGAGAGATGTC-TGCGGAGAAC--GCCGACAGCCTGCAGGCTTGGCTGAGG	654
Swine ApoA IV	AAGCCCTTACG--CAGAGC--GCATGGAGTCCGTG-TACCGCAGAAC--ATCGCACTCGGAGGCTTGGTGGCA	623
ApoA IV related	CCCTT-TGAGGACACTGGACTGAGGAAGGGCGCGCTCGGAGCCCCAGATGCTCTCGAGGAGGTGGCTGAGGAGTTCA	877
Human ApoA IV	CCCTTCCGCGAC--GAGCTCAAGGCCAAGATCGACCAAGAC-----GTGAGGAGCTCAAGGGAC-----	712
Swine ApoA IV	CCCTATGCGGAT--GAGTTCAAGGCCAAGATCGATCAGAA-----GTGAGGAGCTCAAGGGGA-----	681
ApoA IV related	GGCTTTCCGCGCAGGACCTTACTGATAGCTGGCTTCACTGGGCGCATCGACCGAGACTGAGGAGGTCCAGGAGC	957
Human ApoA IV	-GCCTTACG-----CCTAC--GCTGACGA--ATTCAAAGTCAAG--ATTGACCAAGCGTGGAGGAGCTGCGC-GC	777
Swine ApoA IV	-GCCTTACGC-----CCTAT--GCGAGGA--GCTCAAGGCAAG--ATCGATCAGAACGTGGAGGAGCTGCGGC-GC	746
ApoA IV related	AGTTGGGCGACCTCCACCGGCAAGTGGCTTGGCCAGATTTCACAAACAGACAGTGGCAAGGTTCTGAGCAAG	1037
Human ApoA IV	AGCCTG-GCTCCCTATGCT--CAGGACAGCGCAGG--AGAAGCTCAACCACCAGCT--TGAGGGCCTGA-----	838
Swine ApoA IV	AGCCTG-GCCCCCTATGG--CAGGAGCTCCAGG--AGAAGCTCAACCACCAGCT--CGAGGGCCTGG-----	807
ApoA IV related	CTGCAGGCGCGTCTGATGACCTGTGGGAGACATCACTCACAGGCTTATGACACCGGCGACAGCCATCTGGGGAGCC	1117
Human ApoA IV	-----CCTTCCAGATGA-----AGAAGAACGCGA--GGAGC--TCAAGGCCAGGATCTCGGCCAG-TG-----	892
Swine ApoA IV	-----CCTTCCAGATGA-----AGAAGCAGGAG--GGAGC--TGAAGCCAAGATCTCGGCCAA-TG-----	861
ApoA IV related	CTGAGGATCTAGCTGCCAGGCGCATTCCTGCTGGGAGCCTTGGCTCTGAGGCTCTAGCATGTTTCACTG	1197
Human ApoA IV	CCGAGGAGCTGC-----GGCAGA--GGCT-----GGCGCCCTTGGCCGAGGAGCT--GCGTGGC-NA--G	945
Swine ApoA IV	CCGACGAGCTGC-----GGCAGA--AGCT-----GGTCCCGGTGGCCGAGAACGT--GCATGGC-CA--T	914
ApoA IV related	CTTCAAGTGGGCTGTGGGTGGAGGTGGAAGTCTGTGTCAGGACAGGAGGCCACAAAGGGGCTGCTGTCTCTG	1277
Human ApoA IV	CTGAGGGGCAAC--ACCGAG-GGGCTGCAGAGTCTCTG-GCAGAGCTGGGTGGGCACT--GGACCAGCAGTGGAGG	1018
Swine ApoA IV	CTGAAGGGCAAC--ACCGAG-GGGCTGCAGAGTCTCTG-CTGGAGCTGAGAACCACT--GGACCAGCAGTGGAGG	987
ApoA IV related	ATATCCAGGCTCTGCGACTCCCAATCTGGATGATTAATTACAGGCTTTGCAACCCAGCTCCAGTGTCTCAIT	1357
Human ApoA IV	AGTTCCGAGCGCGGTGGAGCCCTA--CGGGGAAACTTCA--ACAAAGCCCTG--GTGCAGC-----AG-----A	1078
Swine ApoA IV	AGTTCCGCTTCAAGGTGGAGCCCTA--CGGGGAGACTTCA--ACAAAGCTTTG--GTGCAGC-----AG-----G	1047

Figure 7 A

Alignment of ApoA IV-related cDNA with Human and Swine cDNA's

ApoA IV related	TGGGAATGCTCATGAGTTACTCCATTCAAGGTGAGGGAGTAGGGAGGGAGAGGCACCATGCATGTGGGTGATTATCTGC	1437
Human ApoA IV	TGGAAACAGCTCAGGA-----CGAAACTGGGCCCCCATGCGGGGG-----ACGTGGAAGGCCACTGTG	1134
Swine ApoA IV	TGGAGGATCTCAGGC-----AGAAGCTGGGCCCTTTGGCGGGGG-----ACGTGGAGGGCCACCTG	1103
ApoA IV related	AAGGCTGTTTCCCGTGATGCTGGAAGGCTGTGCCACTACATCCTGGAGTTTGGCTCTAGTCACCTCTGGCTGCCTGGTGG	1517
Human ApoA IV	AGCTTCCTGGAGAAGGACCTGAGGGACAAGGTCA--ACTCCTT-----CTTCAG-CACCTTCAA-----GGAGA	1195
Swine ApoA IV	AGCTTCCTGGAGAAGGATCTGAGGGACAAGGTCA--ACACCTT-----CTTCAG-CACCTTCAA-----AGAGG	1164
ApoA IV related	CCACTGCTACAGCTGGTCCACAGAGAGGAGGACTTGTGTCCCAGGGCTGCCATGGCAGCTATCAGGGGAATAGAAAGGGA	1597
Human ApoA IV	-----AAGAGAGCCA-GGACAAGACT-CTCTCCCTCCCTGAGCTGGAGCAACAGC-----AGGAACAGCATCAG	1257
Swine ApoA IV	-----AGGCGAGCCA-GGGCCAGAGC-CAGGCCCTCCCT-----GCA-----	1199
ApoA IV related	GAAAGAGATATCTATGGGAGAACATGTGATGGTGTGTGAATATCCCTGCTGGCTCTGATGCTGGTGGGTAGGAAGGTG	1677
Human ApoA IV	GAGCAGGAGCAGGAGCAGGTGCAGATGCTGGCCCCCTTTGGAGAGCTGAGCTGCCCTGGTGCA--CTGGCCCCACCTTGG	1335
Swine ApoA IV	-----CAGGAGAAAGGCGCAG-----GCCCTTTGGAGGGCTGAGCTGCCCTGGTGCT--CCACCCCCACCTGTG	1262
ApoA IV related	TGGGCTGTGATAGGAGAGGGCAGAGCCCATGTTTCTCTGACATAGCTCTACACCTAAATAAGGGACTGAACCTTCCCAACT	1757
Human ApoA IV	TGGAC-----ACCTGC-----CCTGCCCT-GCC-----ACCT-----GTCTGT-CTGTCCCAA--	1376
Swine ApoA IV	---AC-----ACCTGC-----CCTGCCCT-GCCCCTGTCT-----GTCTGT-CTGTCCCAA--	1304
ApoA IV related	GTGGAGCTCTTAAACCCCTCTGGGAGCATACTGTGTGCTCTCCCATCTCCAGCCCTCCTCTGGGTTCCTCAAGTTG	1837
Human ApoA IV	--AGAAGTTC-TGGTATGAACCTTGAAGACACA-----TGTCAGTGGGAGGTGAGACCACCTCTCAA--TAATCAA--TA	1444
Swine ApoA IV	--AGCAGTTC-TGTACAAACCTAGGGATACA-----TGTCAGTGGACCGTGACACTACCTCTGCA--TACTCAA--TA	1372
ApoA IV related	AAGCTAGACTTCTGGCTCAATGAAATAGATGTTTATGATA	1879
Human ApoA IV	AAGCT-----GCTGAGA--ATCTAGCC-----TC	1466
Swine ApoA IV	AAGCT-----GCTGAGA--AACT	1388

Figure 7 B

Alignment of ApoA IV-related protein with Human and Swine ApoA IV

ApoA IV related	MASMAVLTWALLSA---FSATQARKGFWDYFSQTSGD-KGRVEQIHQQKMAREPATL-KLSLEQDLNNMNKFLKIL	74
Human ApoA IV	MFLKAVVLTALVAVAGARAESADQVATVMWDYFSQLSNNAKEAVEHLQKSELTOQNALFQDKLGEVNTYAGDLQKKL	80
Swine ApoA IV	MFLKAVVISLALVAVTGARAEVNDQVATVMWDYFSQSGSNARKAVEHLQKSELTOQNTLFDQDKLGEVNTYTEDLQKKL	80
ApoA IV related	RRLSGSEAPRIPOIPVGMRRQLQEELEEVKARIQRYMAFAHELYGNILEGIRQQKPYTMDIMEQVALRVQELQELRVV	154
Human ApoA IV	VPFATELHERLAKDSEKLKEEIGKELEELRARLLPHANEVSQKIGDNLRELQQRLEPYADQLRTQVNTCAEQIRRQLTPY	160
Swine ApoA IV	VPFATELHERLTKDSEKLKEEIRRELEELRARLLPHATEVVSQKIGDNLRELQQRIGHFHGGGLRTQVNTQVQQLQRQIKPY	160
ApoA IV related	GEDTKAQILGGVDEAWLID---QGIQSRVVVHHTGTFELFHPYASGVSGIGRHVQEHRSVAHPAPASPARISRCVQV	230
Human ApoA IV	QRMERVLRENADSTQASLRPHADELKAKIDQNVVELKGRITPYADEFKVIKIDQTVVEELRRSLAPYAQTQEKLNHQLEG	240
Swine ApoA IV	AERMESVLRQNI RNLEPASVAFYADEFKAKIDQNVVELKGSITPYAEELKAKIDQNVVEELRRSLAPYAQTQEKLNHQLEG	240
ApoA IV related	LSRKLTAKAKAHARIQQNLQLREELSRAPAGT---GTEGAGDPDMISEEVRQLQAFQDITYLOIAAETRAIDQ	305
Human ApoA IV	LTQMKNNAEELKARISASAEELRQLALAEADVRGNIRGNTGLOKSLAEIIGCHLDQQVEEFRRRVEPYGENFNKALVQ	320
Swine ApoA IV	LAFQMKKQAEELKAKISANADELRQLVFAENNVHGHILKGNTEGLOKSLILEIRSHLDQQVEEFRLLKVEPYGETFNKALVQ	320
ApoA IV related	ETEVQQLAIPPPGHSAFAPEFQQTDSGKVLKQLARLDDLWEDITHSLI-----HDQGHSHLGDH	366
Human ApoA IV	QMEQLRTKLGPAGDVEGHLSFLEKDLRDKNVFFSTFKKEKESQDKTILSLPELQQQEQHQEQQQEQVQVMLAPLES	396
Swine ApoA IV	QVEDLRQKLGLAGDVEGHLSFLEKDLRDKNVTFFSTILKKEASQGSQALPAQEKAAQ-----APLEG	382

Figure 8

Alignment of ApoA IV-related cDNA with Rat RAP3 cDNAs

ApoA IV related	AGACGTGAGCAGAGGAGATAATGGCAAGCATGGCTGCGGTGCTCACCTGGGCTCTGGCTCTTCTTTAGCGTTTTCGGCC	80
Rat RAP3 A	-----GC--ATCGTGGAAAGCATGGCTGCGGTGCTCACCTGGGCACTCGCCCTCTCTCAGTGTTCGCACT	65
Rat RAP3 B	-----GC--ATCGTGGAAAGCATGGCTGCGGTGCTCACCTGGGCACTCGCCCTCTCTCAGTGTTCGCACT	65
ApoA IV related	ACCCAGGCAACGAAAGGCTTCTGGGACTACTTACGCCAGACAGCGGGACAAAGGCAAGGTGGAGCAGATCCATCAGCA	160
Rat RAP3 A	GTACAGCGCAGGAAGAGCTTCTGGGAGTACTTCGGCCAGAACAGCCAGGGCAAGGCATGATGGGCCAG-----CAGCA	139
Rat RAP3 B	GTACAGCGCAGGAAGAGCTTCTGGGAGTACTTCGGCCAGAACAGCCAGGGCAAGGCATGATGGGCCAG-----CAGCA	139
ApoA IV related	GAAGATGGCTGGGAGCCCGCGACCTGAAAGACAGGCTTGAGCAAGACCTCAACAATATGAACAAGTTCTGGAAAAGC	240
Rat RAP3 A	GAAGCTGGCAGCAGGAG-----AGCCTGAAAGGTAGCTTGAGCAAGACCTCTACAATATGAACAATTTCTAGAAAAGC	213
Rat RAP3 B	GAAGCTGGCAGCAGGAG-----AGCCTGAAAGGTAGCTTGAGCAAGACCTCTACAATATGAACAATTTCTAGAAAAGC	213
ApoA IV related	TGAGGCTCTGAG-----TGGGAGGAGGCTCTCGGCTCCACAGGACCCGGTGGGCACTGGCGCGCAGCTGCAGGAG	314
Rat RAP3 A	TGGGACCTTGAGAGAGCCTGGGAAGGAGCCTCTCGGCTGGCAGGATCCAGAAGGCAATTCGAAGCAGTTGCAGCA	293
Rat RAP3 B	TGGGACCTTGAGAGAGCCTGGGAAGGAGCCTCTCGGCTGGCAGGATCCAGAAGGCAATTCGAAGCAGTTGCAGCA	293
ApoA IV related	GAGTTGGAGGAGGTGAAGGCTTCGCTCCAGCCCTACATGGCAGAGGCGCAGGCTGGTGGCTGGAAATTTGGAGGGCT	394
Rat RAP3 A	GAGCTGGAGGAAGTGAGCACACGCTGGAGCCCTACATGGCTGCAAGGCAACGAGGCTGGCTGGAAATTTGGAGGGCT	373
Rat RAP3 B	GAGCTGGAGGAAGTGAGCACACGCTGGAGCCCTACATGGCTGCAAGGCAACGAGGCTGGCTGGAAATTTGGAGGGCT	373
ApoA IV related	GCGGCAGCAACTGAAGCCCTACACGATGGATCTGATGGAGCAGGTGGCCCTGGCGTGCAGGAGCTGCAGGACAGTTGC	474
Rat RAP3 A	GAGGCAGCAGTTGAACCCCTACACGCTCGAGCTGATGGAGCAGGTAGCCCTGAGCGTGAGGATCTGCAAGAACAGCTGC	453
Rat RAP3 B	GAGGCAGCAGTTGAACCCCTACACGCTCGAGCTGATGGAGCAGGTAGCCCTGAGCGTGAGGATCTGCAAGAACAGCTGC	453
ApoA IV related	GGGTGGTGGGGGAAGACACCAAGGCCAGTTGCTGGGGGGCGTGGAAGAGGCTTGGGCTTTGCTGCAGGAGCTGCAGAGC	554
Rat RAP3 A	GCATGGTGGGAAAAGGCACCAAGGCCAGCTCTGGGGGGCGTGATGAGGCGATGAGCCTGCTGCAGGATATGCAAAAGT	533
Rat RAP3 B	GCATGGTGGGAAAAGGCACCAAGGCCAGCTCTGGGGGGCGTGATGAGGCGATGAGCCTGCTGCAGGATATGCAAAAGT	533
ApoA IV related	CGGTGGTGCAACCAAGGCGCTTCAAAAGAGCTCTTCCACCCATAGCGGAGAGGCTGGTGAGGGGATGGGGGCCA	634
Rat RAP3 A	CGAGTGTGCAACCAAGGCGCTTCAAAAGAGCTCTTCCACCCATAGCGGAGAGGCTGGTGAGGGGATGGGGGCCA	613
Rat RAP3 B	CGAGTGTGCAACCAAGGCGCTTCAAAAGAGCTCTTCCACCCATAGCGGAGAGGCTGGTGAGGGGATGGGGGCCA	613
ApoA IV related	CGTGAGGAGCTGCACCGGAGTGTGCTCCGACGGCCCGGCCAGCCCGCGGCTCAGTGCTGCGTGCAGGTGCTCT	714
Rat RAP3 A	TGTGAGGAGCTGCACCGGAGTGTGCTCCTCAGCAGTTGCCAGCCCGCGAGACTCAGTGCTGCGTGCAGACCTGT	693
Rat RAP3 B	TGTGAGGAGCTGCACCGGAGTGTGCTCCTCAGCAGTTGCCAGCCCGCGAGACTCAGTGCTGCGTGCAGACCTGT	693
ApoA IV related	CCCGGAAGCTCAGGCTCAAGGCAAGGCTCTGCAAGCAGCATCCAGGAAACCTGGAACAGCTGCGGAGAGCTCAGC	794
Rat RAP3 A	CCCAAACTCAGCAGTAAAGCGAAGGACTTGCAACACAGCATCAACGCAACCTGGATCAGCTGCGAGATGAGCTCAGT	773
Rat RAP3 B	CCCAAACTCAGCAGTAAAGCGAAGGACTTGCAACACAGCATCAACGCAACCTGGATCAGCTGCGAGATGAGCTCAGT	773
ApoA IV related	AGA---GCCTTTGACAGGCAD---TGGGACTGAGGAGGGGCGGCGCGGACCCCGAGATGCTCTCGAGGAGGTCCGCCA	868
Rat RAP3 A	ACCTTCATCGTGTGAGCACAGACGGGCGAGAACAGAGACTCCCTGGACCCTCAAGCTCTCTCTGACGAGGTCCGCCA	853
Rat RAP3 B	ACCTTCATCGTGTGAGCACAGACGGGCGAGAACAGAGACTCCCTGGACCCTCAAGCTCTCTCTGACGAGGTCCGCCA	853
ApoA IV related	GCGACTTCAGGCTTCCGCGGAGACCTACCTGCAGATAGCTGCTTCACTCGCGCATTCAGACAGGAGATGAGGAGG	948
Rat RAP3 A	GAGACTCCAGGCTTTTCGACATGACACCTACCTGCAGATCGCTGCATTCACTCAGGCCATTGACAGGAGACCGAGGAA	933
Rat RAP3 B	GAGACTCCAGGCTTTTCGACATGACACCTACCTGCAGATCGCTGCATTCACTCAGGCCATTGACAGGAGACCGAGGAA	933
ApoA IV related	TCCAGCAGCAGCTGGGCGCACCTTCAACAGGCCACAGTGCTTCCGCTCCAGAGTTTCAACAAACAGACAGTGGCAAGGT	1028
Rat RAP3 A	TCCAGCAGCAGCTGGCACCACCCCGCTAGCCAAGCGCCTTCCGCTCCAGAGTTGGGACACTCAGACAGTAATAAGGCC	1013
Rat RAP3 B	TCCAGCAGCAGCTGGCACCACCCCGCTAGCCAAGCGCCTTCCGCTCCAGAGTTGGGACACTCAGACAGTAATAAGGCC	1013
ApoA IV related	CTGAGCAAGCTGCAGGCGCTTCTGGATGACCTTGGGAAGACATCACTCTCAGCCTTCATGACCAGGGCCACAGCCATCT	1108
Rat RAP3 A	CTGAGCAGACTGCAGAGCGGCTGGAGAGCTCTGGGAAGATATTGCTATGGCTTCATGACCAGGGCCATAGTCA---	1090
Rat RAP3 B	CTGAGCAGACTGCAGAGCGGCTGGAGAGCTCTGGGAAGATATTGCTATGGCTTCATGACCAGGGCCATAGTCA---	1090
ApoA IV related	GGGGGAACCTTGAGGATCTACCTGCGCAGGCCCTTTTC---CAGCTCTTGTCTGGGAGCCTTGGCTCTGAGCCTCTAGCA	1187
Rat RAP3 A	---GAATAACCTGAGGGTC-----ACTCAGTTAACTCTGCAGCTGTTGTCTGGA-----CCCTGAGCCTTCAGCA	1155
Rat RAP3 B	---GAATAACCTGAGGGTC-----ACTCAGTTAACTCTGCAGCTGTTGTCTGGA-----CCCTGAGCCTTCAGCA	1155

Figure 9 A

Alignment of ApoA IV-related cDNA with Rat RAP3 cDNAs

ApoA IV related	TGGTTCAGTCCTTGAAAGTGGCTGTGGGTGGAGGGTCTGTCAGGACAGG-GAGGCCACCAAGGGCTG	1266
Rat RAP3 A	TGG-----CCTAATAGGCAGAGGGTGGAGGGTCTGCATACTATTGGCGAGGCCACCAAGGTGCTG	1217
Rat RAP3 B	TGG-----CCTAATAGGCAGAGGGTGGAGGGTCTGCATACTATTGGCGAGGCCACCAAGGTGCTG	1217
ApoA IV related	CTGTCTCTGCATATTCAGCCTCTGGAAGTCTCCCAATCTGGATGCATTACATTCCAGGCTTTGCAAAACCCAGGCTCC	1346
Rat RAP3 A	CTG-CCCCAACCTGTCTGGCCTCCT-CAACTCCCCCACTCAGGTGCATTACACTCAGTAGGTTTGGCAAAACAGGTTCC	1295
Rat RAP3 B	CTG-CCCCAACCTGTCTGGCCTCCT-CAACTCCCCCACTCAGGTGCATTACACTCAGTAGGTTTGGCAAA-----	1285
ApoA IV related	CAGTGCTCATTGGGAATGCTCATGAGTTACTCCATTCAAGGGTGAGGGAGTAGGGAGGGAGAGGCCCATGCAATGGG	1426
Rat RAP3 A	GGTGCTCATTGGGA-TCTTAAGGAG-----CAAGAGTG-GGGTGAAGGAGTGGGAG-ATGGTGTGGGGGG	1361
Rat RAP3 B	-----	1285
ApoA IV related	TGATTATCTGCAAGCC--TGTTTGGCTGATGCTGGGAAGCCTGTGCCACTACATCCTGGAGTTTGGCTCTAGTCACTTGT	1504
Rat RAP3 A	AGACTGACTGCAAGCCAGTACTTGAC-CGTTGCTAGAAACCTGTGTCACTACAACTGGAGCCCGGCTCCTATTACTTGA	1440
Rat RAP3 B	-----	1285
ApoA IV related	GGCTGCCTGGTGGCCACTGCTACAGCTGGTQCACAGAGAGGAGCACTTGTCTCCCCAGGGCTGCCATGGCAGTATCAGG	1584
Rat RAP3 A	---TGCCTGATGGTGGCTGTTATAGTGGGTACAGAGGGGAATCTCTGTCTCCCCAGGGTTGTGATGACAGCCTTGTGT	1517
Rat RAP3 B	-----	1285
ApoA IV related	GGAAATAGAAAGGAGAAAGGAAATATCATGGGGAGAACATGTGATGGTGTGTGAATATCCCTGCTGGC---TC--TGATG	1658
Rat RAP3 A	GGAAAGAGGCAGGAGAAATGACACGATGATGGAGTGTGTACATCCCTGCCAGTGGTCTGCTGGGGAATCAGTATG	1597
Rat RAP3 B	-----	1285
ApoA IV related	---CTGGTGGGTACG-----AAAGGTG---TGGG---CTGTGATAGGAGAGGGCAGAGCCCATGTTTCTCTGACATA	1720
Rat RAP3 A	GGATAAATGTGTGATCCCTGCTGTGGTCTCTGCTGGGGATCAGTGATGGGATGGGCAGAGCCCATATTCCTTAGGAA	1677
Rat RAP3 B	-----	1285
ApoA IV related	GCTCTACACCTAAATAAGGACTGAAACCTGCCAAGTGTGGAGCTCCTTAAA-CCCTCTGGGAGCATACTGTGTGCTG	1799
Rat RAP3 A	ACTCTA-ACCCAAATAAGGAACCTGACCCCTCTT-CCAGTGAGGGCTTCTGAANAACCTGTACATAGCAACTGTGTGGCC	1754
Rat RAP3 B	-----	1285
ApoA IV related	TCCCATC-TCCAGCCCCTCCCTCTGGTTCCAAAGTTGAAGCCTAGACTTCTGGCTCAAATGAAATAGATGTTTATGAT	1878
Rat RAP3 A	TCTTCATCATGCAGTCCCACTCTGATTCTGGGATGGAACT--GACTTTTGGTTGGAATGAAATAGACGTCATGAT	1832
Rat RAP3 B	-----	1285
ApoA IV related	-----	1879
Rat RAP3 A	GGAAAAAAAAAAAAAAAA	1850
Rat RAP3 B	-----	1300

Figure 9 B

Alignment of ApoA IV-related protein to Rat RAP3 proteins

ApoA IV related Rat RAP3 A Rat RAP3 B	MA S M A A V L T W A L A L L S A F S A T Q A R K G F W D Y F S Q T S G D K G R V E Q I H Q Q K M A R E R A T L K D S L E Q D L N N M N K F L E K L R P L - - S M A - - - A V I T W A L A L L S V F A T V Q A R K S F W E Y F G Q N S Q G K G M M G Q - - Q Q K L A Q E S - - L K G S L E Q D L Y N N M N F L E K L G P L R E P M A - - - A V I T W A L A L L S V F A T V Q A R K S F W E Y F G Q N S Q G K G M M G Q - - Q Q K L A Q E S - - L K G S L E Q D L Y N N M N F L E K L G P L R E P	78 73 73
ApoA IV related Rat RAP3 A Rat RAP3 B	G S E A P R L P Q D P V G M R R Q L Q E E L E E V K A R I Q P Y M A E A H E L V G W N L E G L R Q Q L K P Y T M D L M E Q V A L R V Q E L Q E Q L R V V G E D I T G K E P P R L A Q D P E G I R K Q L Q Q E L E E V S T R L E P Y M A A K H Q Q V G W N L E G L R Q Q L K P Y T V E L M E Q V G L S V Q D L Q E Q L R M V G K G T G K E P P R L A Q D P E G I R K Q L Q Q E L E E V S T R L E P Y M A A K H Q Q V G W N L E G L R Q Q L K P Y T V E L M E Q V G L S V Q D L Q E Q L R M V G K G T	158 153 153
ApoA IV related Rat RAP3 A Rat RAP3 B	K A Q L L G G V D E A M A L L Q G L Q S R V V H H T G R E K E L F H P Y A E S L V S G I G R H V Q E L H R S V A P H A P A S P A R L S R C V Q V L S R K L T L K K A Q L L G G V D E A M S L L Q D M Q S R V L H H T D R V K E L F H P Y A E R L V T G I G H H V Q E L H R S V A P H A V A S P A R L S R C V Q T L S H K L T R K K A Q L L G G V D E A M S L L Q D M Q S R V L H H T D R V K E L F H P Y A E R L V T G I G H H V Q E L H R S V A P H A V A S P A R L S R C V Q T L S H K L T R K	238 233 233
ApoA IV related Rat RAP3 A Rat RAP3 B	A K A L H A R I Q Q N I D Q L R E E L S R A F - - - A G T G T E E G A G P D P Q M L S E E V R Q R L Q A F R Q D T Y L Q I A A F T R A I D Q E T E E V Q Q Q L A A K D L H T S I Q R N L D Q L R D E L S - T F I R V S T D G A D N R D S L D P Q A L S D E V R Q R L Q A F R H D T Y L Q I A A F T Q A I D Q E T E E I Q H Q L A A K D L H T S I Q R N L D Q L R D E L S - T F I R V S T D G A D N R D S L D P Q A L S D E V R Q R L Q A F R H D T Y L Q I A A F T Q A I D Q E T E E I Q H Q L A	315 312 312
ApoA IV related Rat RAP3 A Rat RAP3 B	P P P P G H S A F A P E F O O T D S G K V L S K L Q A R L D D L W E D I T H S L H D Q G H S H L G - - - D P P P P P S H S A F A P E L G H S D S N K A L S R L Q S R L D D L W E D I A Y G L H D Q G H S Q N N P E G H S G P P P P S H S A F A P E L G H S D S N K A L S R L Q S R L D D L W E D I A Y G L H D Q G H S Q N N P E G H S G	366 367 367

Figure 10

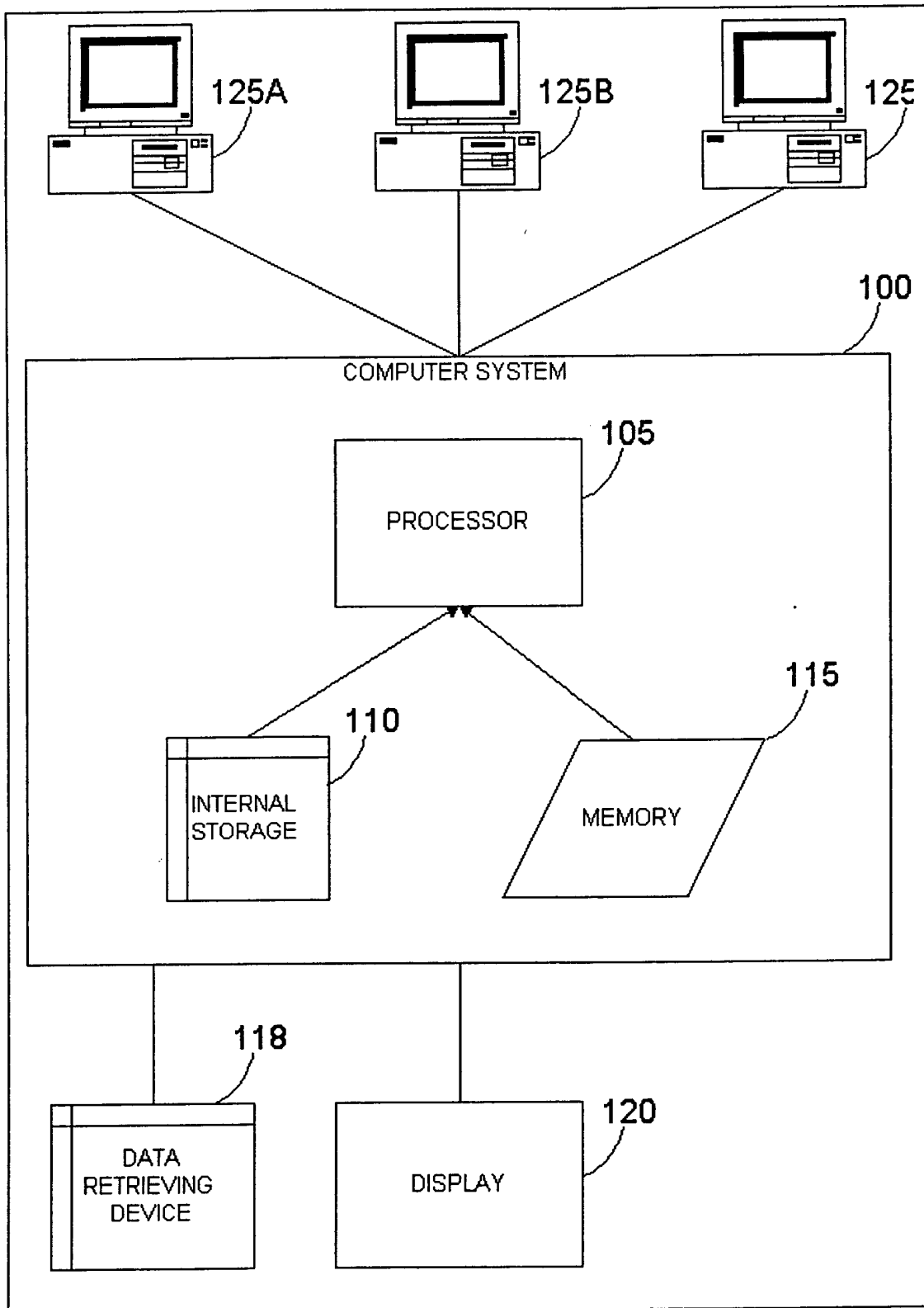


Figure 11

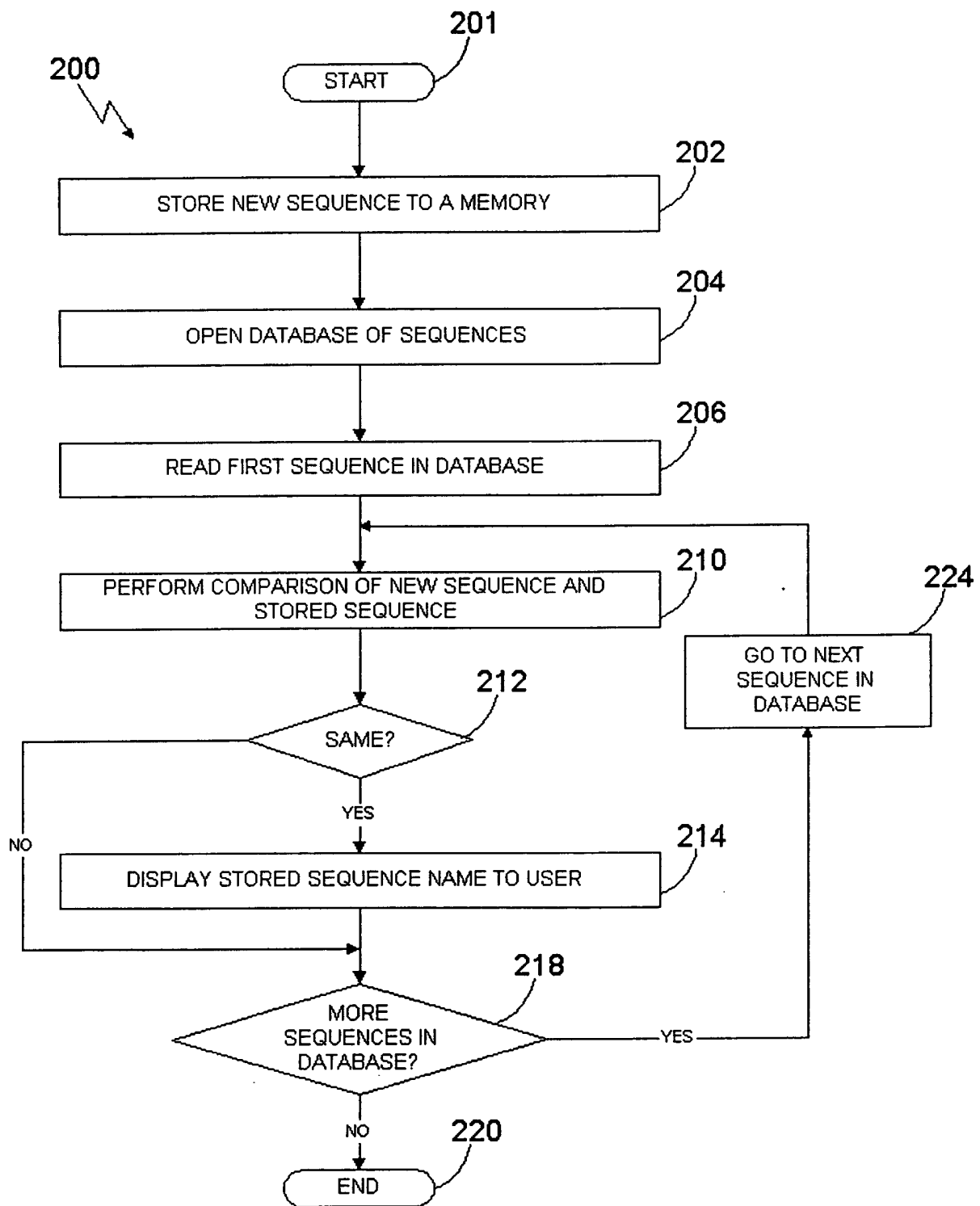


Figure 12

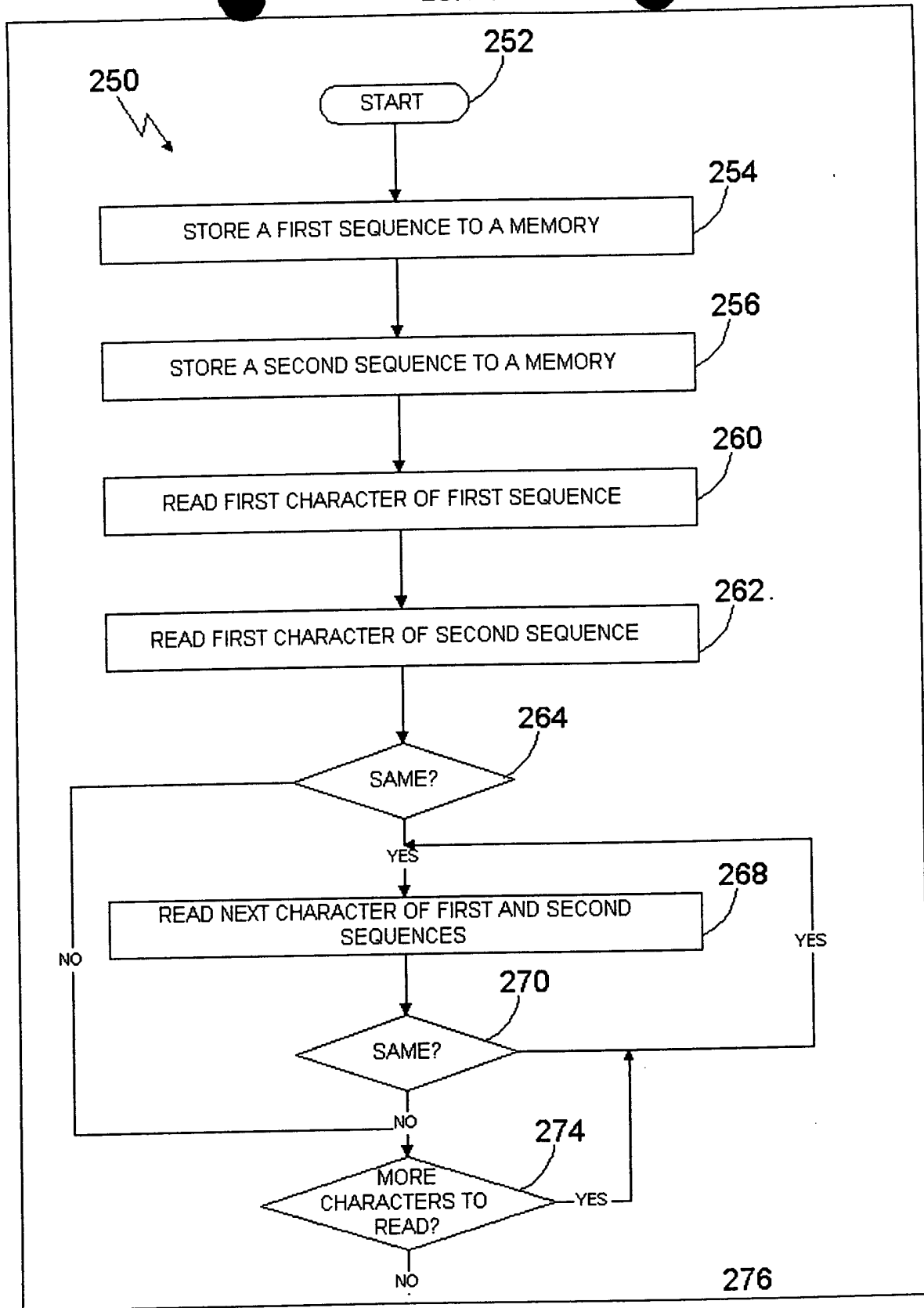


Figure 13

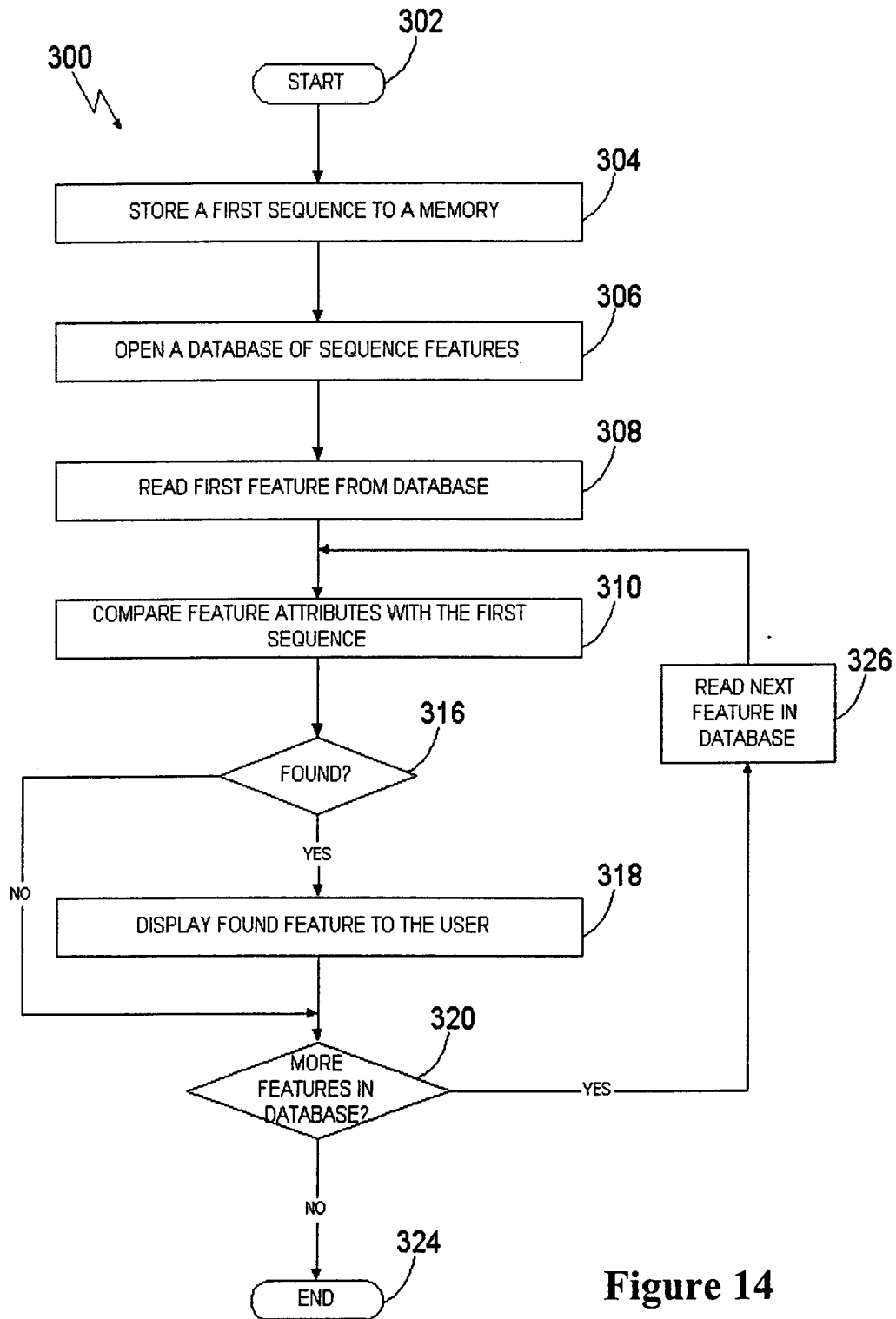


Figure 14